NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION
INACTIVE HAZARDOUS WASTE DISPOSAL REPORT

CLASSIFICATION CODE: 2 REGION: 2 SITE CODE: 241002
EPA ID: NYD039138789

NAME OF SITE : Phelps Dodge Refining Corp
STREET ADDRESS: 42-02 56th Road
TOWN/CITY: COUNTY: ZIP:
Maspeth Queens 11378

SITE TYPE: Open Dump- Structure- Lagoon-X Landfill- Treatment Pond-
ESTIMATED SIZE: 35.8 Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: United States Postal Services
CURRENT OWNER ADDRESS.: ,
OWNER(S) DURING USE...: Phelps Dodge Refining Corporation
OPERATOR DURING USE...: Phelps Dodge Refining Corp.
OPERATOR ADDRESS.....: 42-02 56th Rd., Maspeth, NY
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From 1940 To 1983

SITE DESCRIPTION:
The site is approximately 35 acres in size and has been industrialized since 1891. It is bordered by other industries to the north, east and west. The Newtown Creek flows on the Southern boundry of the facility.

Phelps Dodge Corporation used the facility from 1938-1940 for the production of tri-basic copper sulphate (pesticides), copper refinery, and copper and sulphate pentahydrate.
Waste sludges from the process were stored in an unlined lagoon. The facility is no longer in operation.
A Phase I State Superfund investigation has been completed. The Phelps Dodge Refining Corp. conducted a remedial investigation and found high levels of lead and cadmium in the soil. Approximately 10,000 cubic yards of contaminated soils have been removed, transported and disposed in a chemical waste facility in Ohio. Phelps Dodge Refining Corporation has undertaken a groundwater monitoring investigation and a feasibility study to determine the best way to address the estimated 5,000 cubic yards of contaminated soil remaining.

Groundwater investigations conducted by the PRP were inadequate.
Additional investigations are underway.

HAZARDOUS WASTE DISPOSED: TYPE	Confirmed-X	Suspected- QUANTITY (units)
Cadmium		Unknown
Lead		

SITE CODE: 241002

ANALYTICAL DATA AVAILABLE:
Air- Surface Water- Groundwater- Soil-X Sediment-

CONTRAVENTION OF STANDARDS:
Groundwater- Drinking Water- Surface Water- Air-

LEGAL ACTION:

TYPE..: Consent Order State- X Federal-
STATUS: Negotiation in Progress- Order Signed- X

REMEDIAL ACTION:

Proposed-X Under design- In Progress-X Completed-
NATURE OF ACTION: Removal of contaminated soils.

GEOTECHNICAL INFORMATION:
SOIL TYPE:
GROUNDWATER DEPTH: 2-6 feet.

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Additional information needed to assess environmental problems.

ASSESSMENT OF HEALTH PROBLEMS:

The potential for human exposure from this site is limited to contact with contaminated soils on-site and possible contact with contaminated soils transported off site. Access to the site is restricted by fences and security personnel so it is expected that on-site exposures will be minimal. Areas adjacent to the site are heavily developed with commercial/industrial facilities. Potential off-site exposures should be minimal.

New York State Department of Environmental Conservation

MEMORANDUM

TO: PHELPS-DODGE FILE
FROM: GREGORY MASON
SUBJECT: FIELD INSPECTION OF 9/19/80

DATE: SEPTEMBER 24, 1980

Ann Saracco and I were guided on this inspection by Insvoldstadt of Phelps.

In the copper sulfate building, old process tanks are being used to treat groundwater that is seeping into the building basement. The ground is high in copper and iron content due to long storage of materials on open ground. It is now covered with asphalt, almost eliminating the seepage. The seepage is treated with hydrated lime and the resulting sludge is sent back to the process while the filtrate, mixed with cooling water and steam condensate, is discharged to the NYC sewer. Before the area was paved, 20 tons of sludge was produced per month.

The electrolytic refining process is used to separate impurities from the copper anodes cast on-site. Insoluble impurities settle out to form a sludge while the soluble ones remain in the electrolyte. The sludge is sold to a firm that reclaims precious metals from it. As the electrolyte becomes more concentrated, some is bled off and contacted with copper scrap. It is acidic and forms copper sulfate, a product.

In the vicinity of the powerhouse there used to be a sludge lagoon that held a solution of 15-20% copper and iron hydroxides. This area is now paved and used for scrap operations. The sludge used to be carted away to landfills, but is now sent back to the smelter in the West. A new diked area has been created to serve as a lagoon. It is not lined.

In the powerhouse there is a discharge from a water softener recharge. This is for boiler feed. This discharge is new and not provided for in the permit for discharge #007.

In the wire bar furnace building finished electrodes are melted to form bars. Contact cooling water is used in a spray and a bath. Flue dust is collected and sent back to their smelter because it is high in copper. The cooling water is put into a tank and allowed to settle. The supernatant is decanted and reused and the sludge is stored in their lagoon. Any discharge goes to outfall #005.

We inspected the 43rd Street sewer outfall and saw a small discharge next to it, which is probably the softener backwash and steam traps from the powerhouse. Phelps does not really know everything about the location of its outlets.

The back of the property was filled with slag from the smelter that has long since been removed. Therefore, seepage into buildings tends to have a high iron content.

Outfall #002 is the discharge of cooling water from the anode casting operation. The contact cooling water is sent to a tank, allowed to settle and decanted, usually to the cooling water tanks at the wire bar furnace, at outfall #005. The ph of the contact cooling systems is adjusted to about 8, the minimum solubility for copper. This is done by adding lime or soda ash. Tri-calcium phosphate is sprayed onto the molds to prevent sticking. It is washed off by the cooling water spray and ends up in the sludge.

The facility uses oil to fire its furnaces and has two 150,000 gallon storage tanks that are filled by barges. They were being refurbished at the time of the visit. The dikes surrounding them seemed to be in relatively poor condition.

Their present sludge lagoon is a diked area on the ground and is unlined. It is allowed to dry and shipped to their smelter in the west, pending final regulations on what is an allowable disposal method.

GM:sk
cc: Ann Saracco

George Radan.

New York State Department of Environmental Conservation

MEMORANDUM

TO: Jim Reid
FROM: Anna Saracco, Toxics Technician
SUBJECT: Inspection of Phelps-Dodge, September 19, 1980

DATE: September 22, 1980

On Friday, September 19, 1980 Greg Mason of the Water division and myself visited Phelps-Dodge Refining Corp. at 42-02 56th Road and their Basic Copper Sulfate Plant at 43-01 56th Road. I visited because the plant had been listed in the original NYSDEC report "Toxic Substances in New York's Environment," of May, 1979. Mr. Ingvoldstad, the Environmental Engineer showed us around to all of the operations on the property. The refinery is located on Newtown Creek.

METAL HYDROXIDE SLUDGE

Sludge is generated from the wastewater treatment process of the Copper Sulfate plant, the wire-bar casting system and the anode casting operation. The wastewater from the wirebar casting operation is collected in a wooden storage tank, which up until a few weeks ago was passed through a Culligan Filter. The filter was cleaned by backwashing into two other storage tanks. Now the wastewater from the wirebar casting operation is allowed to settle in the large holding tank and the sludge pumped into the two holding tanks. Village Cesspool, a carter is called in periodically to empty the sludge from all of the storage tanks on the site and bring it to a storage lagoon on the site. (See picture).

This lagoon is unlined, diked and is about 30 ft. long x 20 ft. wide, and 2 ft. deep. They produce approximately 10 tons per month of the watered sludge, which results in approximately 40 tons to 50 tons of dewatered sludge per year.

Since last spring the lagoon has been located at the eastern end of the property as indicated on the attached map. Previously, it was located at the western end of the property. The area has just recently been paved over and is now used for the storage of their #1 scrap. (Scrap which is 99% pure copper). The lagoon had been at this point since the early sixties.

According to Mr. Ingvoldstad the sludge from the wirebar casting operation contains mostly iron hydroxide, 5- 10% copper, nickel and basic copper sulfate. Calcium tri-phosphate is spread onto the holders that are used for casting the anodes, so this chemical gets into the wastewater and turns up in the sludge. According to the 1975 engineering report which Phelps-Dodge submitted to the water division the sludge from the wirebar casting operation and anode casting operation contains, 4.3% copper, 28% iron and 10% calcium (dry basis). The wastewater from the anode casting operation is treated with hydrated lime or sodium hydroxide in order to keep the ph between 7 and 8. Copper is at its minimum solubility in water at this ph and therefore settles out and becomes part of the sludge. Attached is their SPDES permit which lists chemicals and impurities that get into the water which may be contained in the sludge.

When the sludge comes out of the storage tanks it is 80% water. Then it is put in the lagoon.

Since last Spring they have been storing the sludge on the site with the intentions of shipping it to their smelter in the west who will reclaim the copper. The smelter has been on strike since last spring and therefore they have not been shipping the sludge. Previously Village Cesspool had been hauling it for them. Originally to Fountain Avenue landfill, which the City Dept. of Sanitation stopped. Then to a disposal site in Hicksville. This was also forced to stop. Then to a disposal site in New Jersey. From the beginning of 1979 until the spring the sludge was transported to their smelter out west.

Mr. Ingvoldstad said that they performed the EPA leaching test and the lagoon passed. He is not sure whether EPA will classify this as a hazardous waste or not.

GENERAL STORAGE OF #1 AND #2 COPPER

The company through the years has stored the copper that comes into the plant at various points on their property. The Phelps-Dodge Corp. has been at the site since 1893. Therefore, copper and whatever impurities that are present have leached into the soil. Recently some areas have been paved to prevent this leaching from occurring. The backyard of the Copper sulfate plant on 43rd street has been paved. They used to store copper here, and since it was at the bottom of a slope the rainwater would flow onto it and cause the copper to leach into the ground. Also, the area where they keep scrap #1 (copper that is 99% pure) has been paved recently. (see diagram). The area where the scrap copper #2 (copper which is 95% pure) is stored has not been paved recently. (see picture #2). This area is still leaching copper and other impurities into the ground. They have just begun to pave this area. This area is adjacent to the sludge lagoon area. (See attached diagram.) Slag, waste from the process is currently being stored in this area since their smelter is on strike and they are not able to transport it to them.

A sulfuric acid plant called Nichols Chemical Co. was originally at the site in 1875. They imported iron pyrite ore with copper. Phelps-Dodge later bought the area. The area was filled in with slag which had a heavy iron content at about the turn of the century. Much of the area was a swamp, so the filling in was done. The soil has a high iron content at the present time according to Mr. Ingvoldstad.

STORAGE OF 55 GALLON DRUMS

55 gallon drums containing various cleaners and lubricating oil are stored on a rack in an outside yard. (See diagram and picture #3). The drums on the rack are new and not damaged.

However, several 55 gallon drums of various chemicals are thrown about the yard and are in poor condition.

Examples:

(A) Brilco Sludge Solvent manufactured by Brilco of Brooklyn, NY. It is a fuel oil additive. Four drums which were old and rusted were on the site.

(B) Tri-ethylene glycol - Antifreeze, 3 drums, one rusted and dented.

(C) Pypraul - Monsanto - Hydraulic Oil - 5 old drums, one very dented, may be leaking. They may be toxic, causes irritation to skin. Avoid spills, etc. The "warning" label was very long and detailed.

(D) Veedo Aturbrio 66 Industrial oil
Getty Refining & Manufacturing
Tulsa Oklahoma 74119
10 drums on ground.

(D) Tanner Systems Inc. - Keeps compressed air systems from freezing.

Sauk Rapids, Inc.
Sauk Rapids, Minn.
Winnipeg, Man.
Caution: Do Not Drop

(E) Pozzolith 122 - HE, concrete - one drum dented

(F) Sodium Silicate - Indenpendent Chemical Co, one drum - slightly rusted. A few more around.

(G) Antifreeze

(H) Cleaner - drum OK, Did not get brand name -

(I) One old drum, full, rusted, no label.

The storage of drums that for one reason or another is not useable is very poor. I gave him the name and number of Chemical Waste Management and Radiac Research Corp., as two companies who would remove these drums.

Other Solid Wastes Generated By Phelps-Dodge-

Waste oil - from the machine shop (crankcase oil) is stored in a tank then pumped into the fuel oil. They have two 150,000 gallon fuel oil storage tanks. Previously this oil was given to Hudson Oil. Then Hudson Oil started charging to take it away and they developed this system.

Flu dust- from the blasting furnace and the baghouse filter is shipped back to the smelter in Arizona, or to Amax Smelting in Carteret, New Jersey. It contains 30-50% Copper. Up until 1964 there was a smelter on the site and they would put it into their own smelting operation.

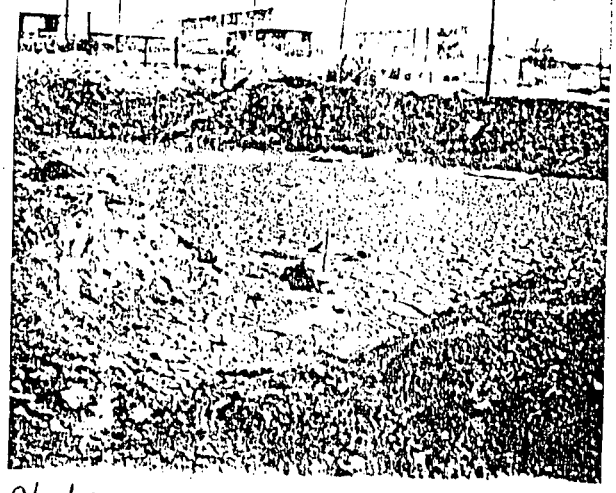
Slag with the impurities obtained when refining copper is stored near the lagoon area and is sent to Arizona to be reclaimed. It also used to be used in the smelting operation that was on the property until 1964.

Copper Sulfate Plant Process Sludges -

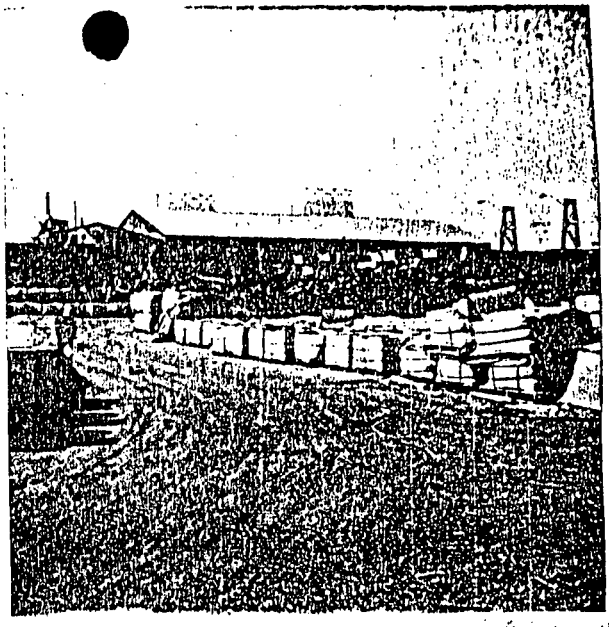
(A) Gold and silver sludge from the electrolytic process is sent to the Amax Smelter in Cateret, N.J.

CC: Greg Mason
David Knowles

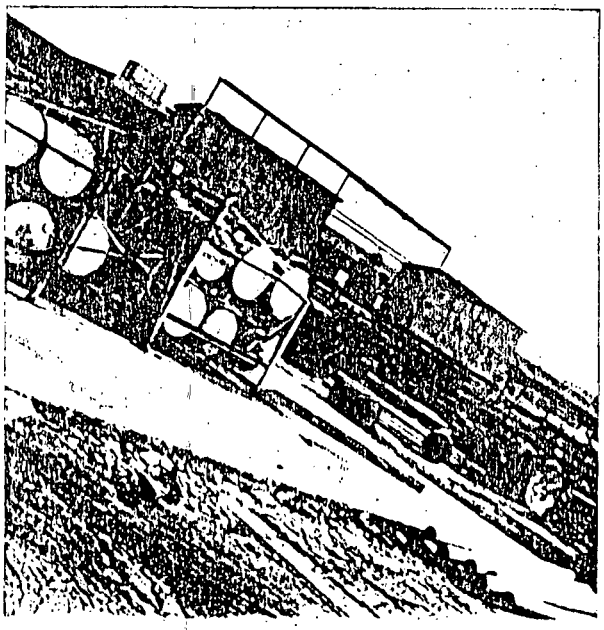
AS:vtp



9/19/80
Picture 1
Phelps-Dodge sludge storage lagoon.

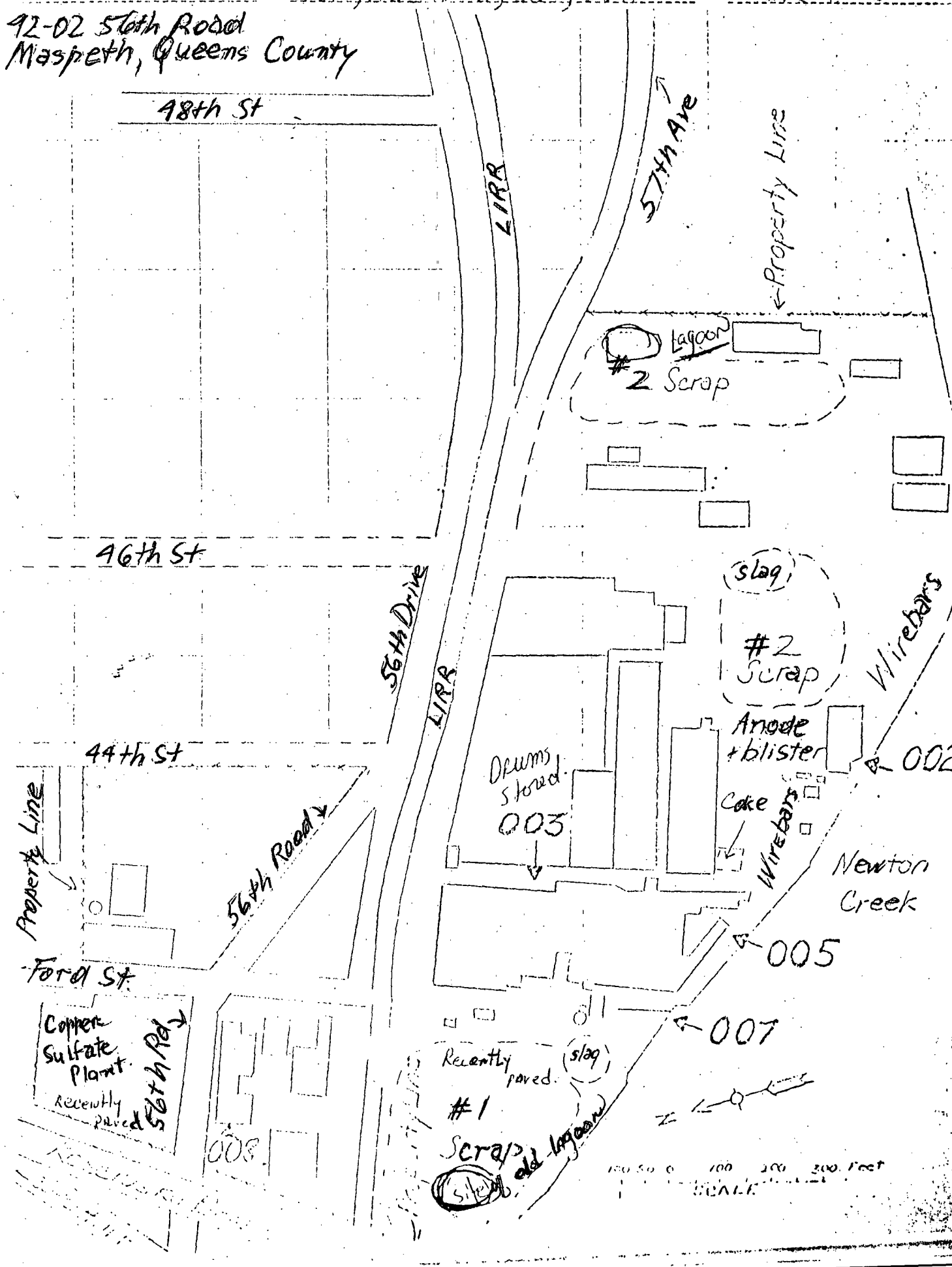


9/19/80
Picture ② – storage of #2 scrapp
at Phelps-Dodge Refinery. 95% Cu



9/19/80
Picture 3
Storage ~~of~~ AREA for oil + solvents
at Phelps-Dodge refinery

DATE ... SUBJECT SPDES Permit #0052558
BY ... DATE ... Location Plan
002, 003, 005, 007, 008
SHEET NO. ... OF ...
JOB NO. SK 8832



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

APPLICATION FORM "C" FOR A STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) PERMIT
INDUSTRIAL OR MINING

1. APPLICANT DATA

APPLICATION TYPE: ☐ New ☒ Renewal ☐ Modification

IF RENEWAL OR MODIFICATION, GIVE PREVIOUS APPLICATION NO., EFFECTIVE DATE, EXPIRATION DATE: No. NY-0034908 | Effective Date 10/31/74 | Expiration Date 10/31/79

OWNER'S NAME (Corporate, Partnership or Individual): PHELPS DODGE REFINING CORPORATION

TYPE OF OWNERSHIP: ☒ Corporate ☐ Individual ☐ Partnership ☐ Public

OWNER'S MAILING ADDRESS (Street, City, State, Zip Code): 300 PARK AVENUE, NEW YORK, NEW YORK 10022

REFER ALL CORRESPONDENCE TO: (Name, Title and Address): R. Scheurer, Manager, 42-02 56th Road, Maspeth, New York 11378

TELEPHONE NO. (Include Area Code): 212 | 729-8040

FACILITY NAME: Laurel Hill Works, Basic Copper Sulfate Plant

FACILITY LOCATION (Street or Road): 43-01 56th Road

CITY, TOWN OR VILLAGE: Maspeth

COUNTY: Queens

GIVE EXPLICIT DIRECTIONS TO LOCATION, If Necessary: Near North End of Kosciusko Bridge, BQE

NATURE OF BUSINESS OR TYPE OF FACILITY: Manufacturer of Tri-Basic Copper Sulfate

NO. OF EMPLOYEES: 6

NO. OF SHIFTS: 3

2. IF ALL YOUR WASTE IS DISCHARGED TO A PUBLICLY OWNED WASTE TREATMENT FACILITY AND/OR A LICENSED WASTE SCAVENGER AND TO THE BEST OF YOUR KNOWLEDGE YOU ARE NOT REQUIRED TO OBTAIN AN SPDES PERMIT, COMPLETE THIS SECTION ONLY, SIGN APPLICATION AND RETURN.

AND/OR

NAME AND ADDRESS OF MUNICIPALITY RESPONSIBLE FOR RECEIVING WASTE: Not Applicable (N.A.)

NAME AND ADDRESS OF LICENSED WASTE SCAVENGER: N.A.

RECEIVED

APR 1 ? 1979

DIVISION OF ... Bur. of Stru... P.D.E.S. ...ION

3. PRODUCTION DATA (Use additional forms, if necessary)

PRINCIPAL TYPES OF PROCESSING DONE AT THIS FACILITY: Wet chemical reaction, centrifuging, filtration, drying

PRINCIPAL PRODUCTS AND AMOUNTS PRODUCED PER TIME UNIT	RAW MATERIALS AND AMOUNTS CONSUMED PER TIME UNIT
1. Tri-Basic Copper Sulfate, 1800 tons/year capacity	1. Copper Sulfate, 3600 tons/year (capacity)
2.	2. Soda Ash, 1200 tons/year (capacity)
3.	3.
4.	4.
5.	5.

4. DOES ANY OF YOUR DISCHARGES CONTAIN OR IS IT POSSIBLE FOR ANY DISCHARGE TO CONTAIN ONE OR MORE OF THE FOLLOWING SUBSTANCES ADDED AS A RESULT OF YOUR OPERATIONS, ACTIVITIES OR PROCESSES?

☐ Aluminum	☒ Arsenic	☐ Boron	☐ Chromium	☐ Flourides	☒ Lead	☒ Nickel	☒ Selenium	☒ Tin
☒ Ammonia	☐ Barium	☒ Cadmium	☒ Copper	☒ Gold	☐ Manganese	☒ Oil & Grease	☒ Silver	☒ Zinc
☒ Antimony	☐ Beryllium	☒ Chlorine	☐ Cyanide	☒ Iron	☒ Mercury	☐ Phenols	☒ Sulfides	

☐ Corrosion control chemicals (specify) None

☐ Halogenated organics or halogenated hydrocarbons (e.g. chlorinated, flourinated or brominated) (specify) None

☐ Herbicides or pesticides (specify) Only Tri-Basic Copper Sulfate, the plant product, which is a pesticide

☐ Radioactivity (specify) None (except background)

☐ Slimicides, biocides or algaecides (specify) Only Tri-Basic Copper Sulfate which can be used as an algaecide

☐ Substituted aromatics (e.g. derivatives of benzene, pyridene, biphenyl, napthalene, coal or petroleum tar, etc.) (specify) See below

☐ Surfactants (specify) See below

☐ None of the above

Specify the trade names and manufacturer of any chemicals used at this facility which are not listed above and whose specific constituents are not known to you. Blancol-N (GAF) (a sulfonated naphthalene formaldehyde condensate) is added in the dry form to the dry product. It is not added to any liquid stream.

Explanation of above: (Attach additional sheets, if necessary) Sodium Sulfate, resulting from the chemical reaction,

PART III

SUBSTANCES OF CONCERN
(Refer to attached TABLE I)

Complete all information for those substances your facility has used, produced, stored, distributed or otherwise disposed of since January 1, 1971. Do not include chemicals used only in analytical laboratory work. Enter the name and code from Table I. If facility uses a substance in any of the Classes A – F which is not specified in the list, enter it as code class plus 99, e.g. B99 with name, usage, etc.

NAME OF SUBSTANCE	CODE	AVERAGE ANNUAL USAGE	AMOUNT NOW ON HAND	(✓) GAL.	(✓) LB.	PURPOSE OF USE (State whether produced, reacted, blended packaged, distributed, no longer used, etc
Xylene	D03	None	None	x		Discontinued
1,1,1-trichloroethane	A07	None	None	x		Discontinued
Asbestos, sheet and blocks	G01	600	3200		x	Furnace insulation
Asbestos, pipe covering	G01	None	100		x	Piping insulation
Asbestos, safety supplies	G01	50	100		x	Gloves, aprons, etc.

If you use chemicals of unknown composition, list trade name or other identification, name of supplier and complete information.

NAME OF SUBSTANCE	AVERAGE ANNUAL USAGE	AMOUNT NOW ON HAND	(✓) GAL.	(✓) LB.	SUPPLIER	PURPOSE OF USE (State whether produced, reac. blended, packaged, distribut no longer used, etc.)
"Askarel"	None	14,125	X		Westinghouse	Transformer cooling
"Pyranol"	None	None	X		General Electric	Transformer cooling
Above items are forms of polychlorinated biphenyls						
1-50 solvent, non-flammable	900	54	X		John B. Moore Co.	Parts cleaner
"Lectrosol"	None	55	X		Brilco Co.	Parts cleaner
Also see exhibit A attached to application form C for additional chemicals of unknown comp.						

I hereby affirm under penalty of perjury that information provided on this form is true to the best of my knowledge and belief. False statements made here are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

SIGNATURE (Owner, Partner, or Officer) — DATE 7/1/80

NAME (Printed or Typed): M. S. Bell — TITLE: President

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

APPLICATION FORM "C" FOR A STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) PERMIT
INDUSTRIAL OR MINING

APPLICANT DATA

APPLICATION TYPE	IF RENEWAL OR MODIFICATION, GIVE PREVIOUS APPLICATION NO., EFFECTIVE DATE, EXPIRATION DATE		
[ ] New [X] Renewal [ ] Modification	No. NY-- 0005258	Effective Date 12/1/79	Expiration Date 12/31/80

OWNER'S NAME (Corporate, Partnership or Individual)	TYPE OF OWNERSHIP
PHELPS DODGE REFINING CORPORATION	[X] Corporate [ ] Individual [ ] Partnership [ ] Public

OWNER'S MAILING ADDRESS (Street, City, State, Zip Code)
300 PARK AVENUE, NEW YORK, NEW YORK 10022

REFER ALL CORRESPONDENCE TO: (Name, Title and Address)	TELEPHONE NO. (Include Area Code)
Mr.R.Scheurer, Works Manager,42-02 56 Road,Maspeth,N.Y.11378	212 | 729-8040

FACILITY NAME	FACILITY LOCATION (Street or Road)	CITY, TOWN OR VILLAGE
Laurel Hill Works(Copper Refinery)	42-02 56 Road,	Maspeth, N.Y.11378

COUNTY	GIVE EXPLICIT DIRECTIONS TO LOCATION, If Necessary
Queens	Near north end of Kosciusko Bridge, Brooklyn-Queens Expressway

NATURE OF BUSINESS OR TYPE OF FACILITY	NO. OF EMPLOYEES	NO. OF SHIFTS
Primary electrolytic copper refinery	380	3

2. IF ALL YOUR WASTE IS DISCHARGED TO A PUBLICLY OWNED WASTE TREATMENT FACILITY AND/OR A LICENSED WASTE SCAVENGER AND TO THE BEST OF YOUR KNOWLEDGE YOU ARE NOT REQUIRED TO OBTAIN AN SPDES PERMIT, COMPLETE THIS SECTION ONLY, SIGN APPLICATION AND RETURN.

NAME AND ADDRESS OF MUNICIPALITY RESPONSIBLE FOR RECEIVING WASTE	AND/OR NAME AND ADDRESS OF LICENSED WASTE SCAVENGER
Not applicable	Not applicable

3. PRODUCTION DATA (Use additional forms, if necessary)

PRINCIPAL TYPES OF PROCESSING DONE AT THIS FACILITY

Melting and casting of anodes from #2 copper scrap and blister copper.
Electrolytic refining of anodes.
Melting and casting of wirebars and other copper shapes from copper cathodes and #1 electrolytic copper scrap.

PRINCIPAL PRODUCTS AND AMOUNTS PRODUCED PER TIME UNIT	RAW MATERIALS AND AMOUNTS CONSUMED PER TIME UNIT
1. Electrolytic refined copper wirebars 1900 tons/day (capacity)	1. Copper anodes, 62,200 tons/year (1979)
2. Copper cathodes, 6500 tons/month (capacity)	2. #2 copper scrap, 11,500 tons/year (1979)
3. Copper anodes, 24,000 tons per year (1979)	3. #1 copper scrap, 81,500 tons/year (1979)
4. Fire refined cast copper 9,200 tons/year (1979)	4. Blister copper, 7200 tons/year (1979)
5. Copper in slag shipped to smelter,1,220 tons. Copper in by-products,850 tons/year (1979)	5.

4. DOES ANY OF YOUR DISCHARGES CONTAIN OR IS IT POSSIBLE FOR ANY DISCHARGE TO CONTAIN ONE OR MORE OF THE FOLLOWING SUBSTANCES ADDED AS A RESULT OF YOUR OPERATIONS, ACTIVITIES OR PROCESSES?

[ ] Aluminum	[X] Arsenic	[ ] Boron	[X] Chromium	[ ] Flourides	[X] Lead	[X] Nickel	[X] Selenium	[ ] Tin
[ ] Ammonia	[ ] Barium	[X] Cadmium	[X] Copper	[X] Gold	[ ] Manganese	[X] Oil & Grease	[X] Silver	[X] Zinc
[X] Antimony	[ ] Beryllium	[ ] Chlorine	[ ] Cyanide	[X] Iron	[X] Mercury	[X] Phenols	[ ] Sulfides	

[ ] Corrosion control chemicals (specify) Caustic soda, hydrated lime, soda ash

[ ] Halogenated organics or halogenated hydrocarbons (e.g. chlorinated, flourinated or brominated) (specify) None

[ ] Herbicides or pesticides (specify) None

[ ] Radioactivity (specify) None, except background

[ ] Slimicides, biocides or algaecides (specify) None

[ ] Substituted aromatics (e.g. derivatives of benzene, pridene, biphenyl, napthalene, coal or petroleum tar, etc.) (specify) None

[ ] Surfactants (specify) None

[ ] None of the above

Specify the trade names and manufacturer of any chemicals used at this facility which are not listed above and whose specific constituents are not known to you. Boiler water treatment chemicals, see exhibit "A"

Synthetic bone ash (calcium phosphate) mould dressings, see exhibit "A"

Explanation of above: (Attach additional sheet, if necessary) Traces in incoming water: see exhibit "B".

Douglas Smelter (Phelps Dodge Corporation) Douglas, Arizona

6. DISCHARGE DATA (Continued) (See Instructions) ATTACH SKETCH SHOWING OUTFALL LOCATIONS

OUTFALL NO.		TYPE OF WASTE	TYPE OF TREATMENT (If none, so state)
002	[ ] Proposed [ ] Replacement [X] Existing [ ] Expansion	Treated, contact and non contact, cooling & boiler water, condensate.	pH adj Sediment

DESIGN FLOW	ACTUAL FLOW	FREQUENCY OF DISCHARGE	IS FLOW EQUALIZATION PROVIDED?
240,000 Gal/Day	50,000 Gal/Day	[ ] Continuous [ ] Intermittent [X] Batch	[ ] Yes [X] No If "Yes", describe in comm

PERIOD OF DISCHARGE		
12 Months per year	5,6 or 7 Days per week	3-4 Hours per

SURFACE DISCHARGE	If "Yes", Name of Receiving Waters	Classification	Waters Index No.
[X] Yes [ ] No	Newtown Creek	II	L.I.-4 (2.1-2.5)

SUBSURFACE DISCHARGE	If "Yes", Name of nearest Surface Water	Distance	SOIL TYPE	Depth to Wate
[ ] Yes [X] No	Not applicable	NA Ft.	NA	

OUTFALL NO.		TYPE OF WASTE	TYPE OF TREATMENT (If none, so state)
003	[ ] Proposed [ ] Replacement [X] Existing [ ] Expansion	Sanitary sewer only	None

DESIGN FLOW	ACTUAL FLOW	FREQUENCY OF DISCHARGE	IS FLOW EQUALIZATION PROVIDED?
50,000 Gal/Day	30,000 Gal/Day	[X] Continuous [ ] Intermittent [ ] Batch	[ ] Yes [X] No If "Yes", describe in comm

PERIOD OF DISCHARGE		
12 Months per year	7 Days per week	24 Hours per

SURFACE DISCHARGE	If "Yes", Name of Receiving Waters	Classification	Waters Index No.
[X] Yes [ ] No	Newtown Creek	II	L.I.-4 (2.1-2.5)

SUBSURFACE DISCHARGE	If "Yes", Name of nearest Surface Water	Distance	SOIL TYPE	Depth to Wate
[ ] Yes [X] No	Not applicable	NA Ft.	NA	NA

OUTFALL NO.		TYPE OF WASTE	TYPE OF TREATMENT (If none, so state)
006	[ ] Proposed [ ] Replacement [X] Existing [ ] Expansion	Treated contact and non contact cooling & boiler water; condensate.	pH adj sediment

DESIGN FLOW	ACTUAL FLOW	FREQUENCY OF DISCHARGE	IS FLOW EQUALIZATION PROVIDED?
250,000 Gal/Day	50,000 Gal/Day	[ ] Continuous [ ] Intermittent [X] Batch	[ ] Yes [X] No If "Yes", describe in comm

PERIOD OF DISCHARGE		
12 Months per year	5,6, or 7 Days per week	3-4 Hours per

SURFACE DISCHARGE	If "Yes", Name of Receiving Waters	Classification	Waters Index No.
[X] Yes [ ] No	Newtown Creek	II	L.I.-4 (2.1-2.5)

SUBSURFACE DISCHARGE	If "Yes", Name of nearest Surface Water	Distance	SOIL TYPE	Depth to Wate
[ ] Yes [X] No	Not applicable	NA Ft.	NA	NA

OUTFALL NO.		TYPE OF WASTE	TYPE OF TREATMENT (If none, so state)
007	[ ] Proposed [ ] Replacement [X] Existing [ ] Expansion	Softener backwash, boiler water, condensate	Boiler reagents

DESIGN FLOW	ACTUAL FLOW	FREQUENCY OF DISCHARGE	IS FLOW EQUALIZATION PROVIDED?
75,000 Gal/Day	40,000 Gal/Day	[X] Continuous [ ] Intermittent [ ] Batch	[ ] Yes [X] No If "Yes", describe in comm

PERIOD OF DISCHARGE		
12 Months per year	7 Days per week	24 Hours per

SURFACE DISCHARGE	If "Yes", Name of Receiving Waters	Classification	Waters Index No.
[X] Yes [ ] No	Newtown Creek	II	L.I.-4 (2.1-2.5)

SUBSURFACE DISCHARGE	If "Yes", Name of nearest Surface Water	Distance	SOIL TYPE	Depth to Wate
[ ] Yes [X] No	Not applicable	NA Ft.	NA	

7. COMMENTS:

Section 6 continued on second page

8. I hereby affirm under penalty of perjury that information provided on this form and any attached supplemental forms is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

APPLICANT'S SIGNATURE (See Instructions)	Date	Printed Name	Title

EXHIBIT "A"

NEW YORK STATE POLLUTANT ELIMINATION SYSTEM (SPDES) PERMIT APPLICATION FORM "C".

ITEM 4, Contained Substances, (continued)

The following are the trade names and manufacturers of chemicals which are being used at this facility and the constituents of which we do not have first hand knowledge:

Water Treatment Chemicals:

Betz, Trevose, Pennsylvania, 19047

"API Balanced Polymer" (Reported Ingredients)

	CAS #
Phosphate salt	10124-56-8
Phoycarboxylic Acid Salt	54193-361
Sulfonated Barboxylic Acid Salt	Not assigned
Polyalkylene Glycol	9038-95-3
Sodium Hydroxide	1310-73-2
Water	

"Polysperse Plus"

	CAS #
Sodium Salt of Polymethacrylic Acid	54193-36-1
Sulfonated Polycarboxylic Acid Salt	Not assigned
Polyoxyethylene Glycol	25322-68-3
Water	

"Corrogen" Catalyzed Sodium Sulfite

	CAS #
Sodium Sulfite	10579-83-6
Sodium Bisulfite	7631-90-5
Cobalt Chloride	7646-79-9

"Diamodic II, 2020"

	CAS #
Carboxylated Polymer	Not assigned

"Diamodic II, 2050"

	CAS #
Potassium Hydroxide	1510-48-3
Triazole Derivative	29385-43-1
Organo Phosphonate	2809-21-4
Phosphate Salt	7558-80-7
Phosphate Salt	6834-92-0
Water	

EXHIBIT "A", (continued)

NEW YORK STATE POLLUTANT ELIMINATION SYSTEM (SPDES) PERMIT APPLICATION FORM "C".

ITEM 4, Contained Substances, (continued)

Compressed Air System Anti-freeze

Tanner Systems, Sauk Rapids, Minnesota

"Frosto"

Mould Dressings

Monsanto Co., St. Louis, Missouri

"Mould-Coat" (Synthetic bone ash, tri-calcium phosphate)

Murlin Chem. Inc., West Consho, Pa.

"Synthetic Bone Ash" (Tri-calcium phosphate)

Miscellaneous

Traces of bis(2-ethylhexyl)phthalate have been found in the New York City Catskill/Delaware water supply, which is the water supply for the plant.

Traces of 1,1,1-trichloroethane, 1,1-dichloroethylene, ethylbenzene and toluene have been found in ground water in the area.

EXHIBIT B

Supplement to application for renewal of NYSPDES-NY005258 Refinery

Phelps Dodge Refining Corporation

Form C-Page 1-Para. 4

The following substances have at times been reported to be present in the discharges listed in permit #005258 and are without permit limitations.

Substance Named in Application	Concentration Milligrams per liter	
	Average	Maximum
Cadmium	0.01	0.01
Gold	0.001	0.002
Iron	1.0	2.0
Phenols	0.03	0.03
Selenium	0.02	0.05
Silver	0.01	0.02
Sulfides	0.01	0.02
Tin	0.01	0.01
Bone Ash, (Ca phosphate)	Part of suspended solids	

bis (2ethylhexyl) phthalate (tr -in N.Y.C. water supply)

1,1,1 trichloroethane	0.008 mg/L.
1,1 dichloroethylene	0.001 mg/L.
ethylbenzene	0.001 mg/L.
toluene	0.003 mg/L.

STATE POLLUTANT DISCHARGE ELIMINATION
Thermal Discharge And Material
Storage Area Supplement For
Application Form C

(Attach to Application Form)

1. Thermal Discharges

Does the temperature of any of the discharges from this facility exceed 70°F. at any time? [X] YES [ ] NO

If yes, attach the following information, and specify which outfall(s) it relate to: 002, 003, 005, 007, 008

a) Range of measured discharge temperatures 002, 005 & 007: 33-120 deg. F.
003 and 008: 33- 90 deg. F.

b) Maximum discharge temperature 120 deg F.

c) Discharge configuration (that is, whether surface, subsurface, effluent diffuser, etc.) Surfaced

d) Chemical additives utilized (also see Section 4 on Form C)
Hydrated lime, soda ash or caustic soda for pH adjustment.

2. Material Storage Areas

Is storm runoff or leachate from any material storage area (such as: coal piles, raw material or finished product stockpiles, etc.) discharged to either surface waters or groundwaters? [X] YES [ ] NO

If "yes", please attach a brief description of types and quantities of materials stored, size of storage area, etc., and show its location and the location of any discharge points on the map required by Section 6 of Form C.

Scrap copper metal
Anode and blister copper metal
Refined copper metal shapes
Slag
Coke
Steel logs
Construction materials

91-19-2 Supplement

9/78

ALBANY, NEW YORK 12233

INDUSTRIAL CHEMICAL SURVEY

PART I

COMPLETE AND RETURN TO THE ABOVE ADDRESS, ATTENTION: INDUSTRIAL CHEMICAL SURVEY.

NAME	SIC CODE (If known)	OFFICE USE ONLY
PHELPS DODGE REFINING CORPORATION	333.1	

MAILING ADDRESS	CITY	STATE	ZIP CODE
42-02 56 Road, Maspeth	New York	New York	11378

NAME (If different)	CONTACT NAME	TELEPHONE
Laurel Hill Works, Copper Refinery	Mr. R. Schleurer	Area 212-729-8040

PHYSICAL ADDRESS (If different)	CITY	STATE	ZIP CODE
(SAME)	(SAME)	(SAME)	(SAME)

PRINCIPAL BUSINESS OF PLANT: Primary Electrolytic Copper Refinery

NOTE: If parent company, give name and addresses of all divisions, subsidiaries, etc. located in New York State. A separate questionnaire is to be completed and submitted for each.)

PART II
Discharge Information

WATER

1. Does your plant discharge liquid wastes to a municipally owned sanitary sewer system? ☐ Yes ☒ No
   Name of System _____
2. Is your facility permitted to discharge liquid wastes under a State (SPDES) or Federal (NPDES) permit? ☒ Yes ☐ No
   Permit Number 0 0 0 5 2 5 8
3. Do you discharge liquid wastes in any other manner? ☐ Yes ☒ No
   Explain _____

If any of the above are "Yes":

a. Do you discharge process or chemical wastes – (i.e. water used in manufacturing including direct contact cooling water and scrubber water)? ☒ Yes ☐ No
b. Do you discharge non-contact cooling water? ☒ Yes ☐ No
c. Do you discharge collected storm drainage only? ☐ Yes ☒ No
d. Do you discharge sanitary wastes only? ☐ Yes ☒ No

AIR

1. Does your facility have sources of possible emissions to the atmosphere? ☒ Yes ☐ No
2. Enter Location and Facility Code as shown on your Air Pollution Control Application for Permits and Certification (If applicable) 4 1 1 7 4 0 4 2 0 2

SOLID AND LIQUID WASTES

1. List Name and Address of Firm (including yourself) removing wastes other than office and cafeteria refuse.

Name	Address	City	State	Zip Code
P & F Trucking Co. (trash)	60-02 30th Avenue	Woodside	N.Y.	11377

2. List Location(s) of Landfill(s) owned and used by your facility.

	Active	Inactive
1	☐	☐
2	☐	☐

PESTICIDES

1. Does this facility:
   Manufacture Pesticides or Pesticide Product Ingredients? ☐ Yes ☒ No
   Produce Pesticides or Pesticide Product Ingredients? ☐ Yes ☒ No
   Formulate Pesticides? ☐ Yes ☒ No
   Repackage Pesticides? ☐ Yes ☒ No
2. EPA Establishment Number ☐☐☐☐☐☐ - ☐☐ - ☐☐☐

APPLICATION FORM "C" FOR A STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) PERMIT
INDUSTRIAL OR MINING

1. APPLICANT DATA

APPLICATION TYPE	IF RENEWAL OR MODIFICATION, GIVE PREVIOUS APPLICATION NO., EFFECTIVE DATE, EXPIRATION DATE		
[ ] New [X] Renewal [ ] Modification	No. NY-0034908	Effective Date 10/31/74	Expiration Date 10/31/79

OWNER'S NAME (Corporate, Partnership or Individual)	TYPE OF OWNERSHIP
PHELPS DODGE REFINING CORPORATION	[X] Corporate [ ] Individual [ ] Partnership [ ] Pub

OWNER'S MAILING ADDRESS (Street, City, State, Zip Code)
300 PARK AVENUE, NEW YORK, NEW YORK 10022

REFER ALL CORRESPONDENCE TO: (Name, Title and Address)	TELEPHONE NO. (Include Area Co
R. Scheurer, Manager, 42-02 56th Road, Maspeth, New York 11378	212 | 729-8040

FACILITY NAME	FACILITY LOCATION (Street or Road)	CITY, TOWN OR VILLAGE
Laurel Hill Works, Basic Copper Sulfate Plant	43-01 56th Road	Maspeth

COUNTY	GIVE EXPLICIT DIRECTIONS TO LOCATION, If Necessary
Queens	Near North End of Kosciusko Bridge, BQE

NATURE OF BUSINESS OR TYPE OF FACILITY	NO. OF EMPLOYEES	NO. OF SHIF
Manufacturer of Tri-Basic Copper Sulfate	6	3

2. IF ALL YOUR WASTE IS DISCHARGED TO A PUBLICLY OWNED WASTE TREATMENT FACILITY AND/OR A LICENSED WASTE SCAVENGER AND TO THE BEST OF YOUR KNOWLEDGE YOU ARE NOT REQUIRED TO OBTAIN AN SPDES PERMIT, COMPLETE THIS SECTION ONLY, SIGN APPLICATION AND RETURN.

NAME AND ADDRESS OF MUNICIPALITY RESPONSIBLE FOR RECEIVING WASTE	AND/OR NAME AND ADDRESS OF LICENSED WASTE SCAVENGER
Not Applicable (N.A.)	N.A.

RECEIVED
APR 1 1979
DIVISION OF ... Dec. of State ... P.D.E.S. ... SION

3. PRODUCTION DATA (Use additional forms, if necessary)

PRINCIPAL TYPES OF PROCESSING DONE AT THIS FACILITY
Wet chemical reaction, centrifuging, filtration, drying

PRINCIPAL PRODUCTS AND AMOUNTS PRODUCED PER TIME UNIT	RAW MATERIALS AND AMOUNTS CONSUMED PER TIME UNIT
1. Tri-Basic Copper Sulfate, 1800 tons/year capacity	1. Copper Sulfate, 3600 tons/year (capacity)
2.	2. Soda Ash, 1200 tons/year (capacity)
3.	3.
4.	4.
5.	5.

4. DOES ANY OF YOUR DISCHARGES CONTAIN OR IS IT POSSIBLE FOR ANY DISCHARGE TO CONTAIN ONE OR MORE OF THE FOLLOWING SUBSTANCES ADDED AS A RESULT OF YOUR OPERATIONS, ACTIVITIES OR PROCESSES?

[ ] Aluminum	[X] Arsenic	[ ] Boron	[ ] Chromium	[ ] Flourides	[X] Lead	[X] Nickel	[X] Selenium	[X] Tin
[X] Ammonia	[ ] Barium	[X] Cadmium	[X] Copper	[X] Gold	[ ] Manganese	[X] Oil & Grease	[X] Silver	[X] Zinc
[X] Antimony	[ ] Beryllium	[X] Chlorine	[ ] Cyanide	[X] Iron	[X] Mercury	[ ] Phenols	[X] Sulfides	

[ ] Corrosion control chemicals (specify) None
[ ] Halogenated organics or halogenated hydrocarbons (e.g. chlorinated, flourinated or brominated) (specify) None
[ ] Herbicides or pesticides (specify) Only Tri-Basic Copper Sulfate, the plant product, which is a pesti
[ ] Radioactivity (specify) None (except background)
[ ] Slimicides, biocides or algaecides (specify) Only Tri-Basic Copper Sulfate which can be used as an algaeci
[ ] Substituted aromatics (e.g. derivatives of benzene, pyridene, biphenyl, napthalene, coal or petroleum tar, etc.) (specify) See below
[ ] Surfactants (specify) See below
[ ] None of the above

Specify the trade names and manufacturer of any chemicals used at this facility which are not listed above and whose specific con... known to you. Blancol-N (GAF) (a sulfonated naphthalene formaldehyde condensate) ... dry form to the dry product. It is not added to any liquid stream.

Explanation of above: (Attach additional sheets, if necessary) Sodium sulfate, resulting from the che... is the principal solute in the filtrate discharged.

...my knowl...

DISCHARGE DATA (Continued) (See Instructions) ATTACH SKETCH SHOWING OUTFALL LOCATIONS

OUTFALL NO.	[ ] Proposed [ ] Replacement [X] Existing [ ] Expansion	TYPE OF WASTE	TYPE OF TREATMENT (If none, so state)
010		Non-contact cooling water, reaction filtrate	pH adjustment, filtration

DESIGN FLOW	ACTUAL FLOW	FREQUENCY OF DISCHARGE	IS FLOW EQUALIZATION PROVIDED?
50,000 Gal/Day	20,000 Gal/Day	[ ] Continuous [X] Intermittent [ ] Batch	[ ] Yes [X] No If "Yes", describe in com

DURATION OF DISCHARGE			
12 Months per year	7 Days per week	24 Hours pe

SURFACE DISCHARGE	If "Yes", Name of Receiving Waters	Classification	Waters Index No.
[X] Yes [ ] No	Newtown Creek via NYC Sewer	II	L.I. -4 (2.1-2.5)

SUBSURFACE DISCHARGE	If "Yes", Name of Nearest Surface Water	Distance	SOIL TYPE	Depth to Wat
[ ] Yes [X] No	NA	NA Ft.	NA	NA

OUTFALL NO.	[ ] Proposed [ ] Replacement [ ] Existing [ ] Expansion	TYPE OF WASTE	TYPE OF TREATMENT (If none, so state)

DESIGN FLOW	ACTUAL FLOW	FREQUENCY OF DISCHARGE	IS FLOW EQUALIZATION PROVIDED?
Gal/Day	Gal/Day	[ ] Continuous [ ] Intermittent [ ] Batch	[ ] Yes [ ] No If "Yes", describe in com

DURATION OF DISCHARGE		
Months per year	Days per week	Hours pe

SURFACE DISCHARGE	If "Yes", Name of Receiving Waters	Classification	Waters Index No.
[ ] Yes [ ] No			

SUBSURFACE DISCHARGE	If "Yes", Name of Nearest Surface Water	Distance	SOIL TYPE	Depth to Wa
[ ] Yes [ ] No		Ft.		

OUTFALL NO.	[ ] Proposed [ ] Replacement [ ] Existing [ ] Expansion	TYPE OF WASTE	TYPE OF TREATMENT (If none, so state)

DESIGN FLOW	ACTUAL FLOW	FREQUENCY OF DISCHARGE	IS FLOW EQUALIZATION PROVIDED?
Gal/Day	Gal/Day	[ ] Continuous [ ] Intermittent [ ] Batch	[ ] Yes [ ] No If "Yes", describe in com

DURATION OF DISCHARGE		
Months per year	Days per week	Hours pe

SURFACE DISCHARGE	If "Yes", Name of Receiving Waters	Classification	Waters Index No.
[ ] Yes [ ] No			

SUBSURFACE DISCHARGE	If "Yes", Name of Nearest Surface Water	Distance	SOIL TYPE	Depth to Wat
[ ] Yes [ ] No		Ft.		

7. COMMENTS:

The current Permit was issued in its present form on March 17, 1977, pursuant to a Stipulation between the Permittee, NYSDEC, Interstate Sanitation Commission and US EPA which took into consideration the Order on Consent, amended on March 26, 1974, between the Commissioner of the NYSDEC and the Permittee.

8. I hereby affirm under penalty of perjury that information provided on this form and any attached supplemental forms is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

APPLICANT'S SIGNATURE (See Instructions)	Date	Printed Name	Title
X Howard Barkell	4/12/79	Howard Barkell	President

...ENTAL CONSERVATION
...ALBANY, NEW YORK 12233

INDUSTRIAL CHEMICAL SURVEY

PART I

...TO THE ABOVE ADDRESS, ATTENTION: INDUSTRIAL CHEMICAL SURVEY.

PHELPS DODGE REFINING CORPORATION		SIC CODE (If known) 2879	OFFICE USE ON
COMPANY MAILING ADDRESS: 42-02 56th Road (Maspeth)	CITY: New York	STATE: New York	ZIP CODE: 11378
PLANT NAME (If different): Basic Copper Laurel Hill Works, Sulfate Plant	CONTACT NAME: R. Scheurer, Manager	TELEPHONE: Area 212-729-8040	
PLANT ADDRESS (If different): Street 43-01 56th Road, Maspeth	CITY: New York	STATE: New York	ZIP CODE: 11378

PRINCIPAL BUSINESS OF PLANT: Manufacturer of Tri-Basic Copper Sulfate

NOTE: (If parent company, give name and addresses of all divisions, subsidiaries, etc. located in New York State. A separate questionnaire is to be completed and submitted for each.)

PART II
Discharge Information

WATER

1. Does your plant discharge liquid wastes to a municipally owned sanitary sewer system? [X] Yes [ ] No
   Name of System _____
2. Is your facility permitted to discharge liquid wastes under a State (SPDES) or Federal (NPDES) permit? Permit Number 0 0 3 4 9 0 8 [X] Yes [ ] No
3. Do you discharge liquid wastes in any other manner? [ ] Yes [X] No
   Explain _____

If any of the above are "Yes":

a. Do you discharge process or chemical wastes – (i.e. water used in manufacturing including direct contact cooling water and scrubber water)? [X] Yes [ ] No
b. Do you discharge non-contact cooling water? [X] Yes [ ] No
c. Do you discharge collected storm drainage only? [ ] Yes [X] No
d. Do you discharge sanitary wastes only? [ ] Yes [X] No

AIR

1. Does your facility have sources of possible emissions to the atmosphere? [X] Yes [ ] No
2. Enter Location and Facility Code as shown on your Air Pollution Control Application for Permits and Certification (If applicable) 4 1 1 7 4 0 4 2 0 2

LIQUID WASTES

1. List Name and Address of Firm (including yourself) removing wastes other than office and cafeteria refuse.

Name	Address	City	State	Zip Code
P & F Trucking Company	60-02 30th Avenue	Woodside	NY	11377
Village Cesspool	26 Alpine Lane	Hicksville	NY	11801

2. List Location(s) of Landfill(s) owned and used by your facility.

		Active	Inactive
1		[ ]	[ ]
2		[ ]	[ ]

PESTICIDES

1. Does this facility:
   Manufacture Pesticides or Pesticide Product Ingredients? [X] Yes [ ] No
   Produce Pesticides or Pesticide Product Ingredients? [X] Yes [ ] No
   Formulate Pesticides? [ ] Yes [X] No
   Repackage Pesticides? [ ] Yes [X] No
2. EPA Establishment Number [ ] [ ] [1] [2] [7] [0] - [ ] [ ] - [ ] [1]

Initial Mailing / / by
Initial Contact / / by
Appointment Made 9/28/72 by BCWK
Site or [Phone] Visit 9/28/72 by BCWK
Follow-up / / by
Form Completed 9/28/72 by BCWK
Comments:

S.F compl.

Company Code 3 3 3 1 7 1 3 0 0 2

Company Name PHELPS DODGE REFINING CORP.
Address 300 PARK AVE
NEW YORK, NEW YORK 10022
County QUEENS Phone (212) PLJ-3200
SIC Codes 1. 3331 3.
2. 4.

New York State Hazardous Waste Survey
Department of Environmental Conservation
Division of Solid Waste Management
50 Wolf Road, Albany, N.Y. 12233 Telephone: (518) 457-6605

I. General Information

1. Company Name PHELPS DODGE REFINING CORP. [LAUREL HILL REFINERY.

Mailing Address 300 PARK AVE (Street) N.Y. (City) N.Y. (State) 10022 (Zip)

Plant Location / / Same as above

42-02 56TH RD (Street) MASPETH (City) N.Y. (State) 11378 (Zip)

2. If Subsidiary, Name of Parent Company PHELPS DODGE CORP

3. Individual Responsible for Plant Operations RAY SCHEURER (Name)

PLANT MGR. (Title) (212) 729-8040 (Phone)

4. Individual Providing Information ROBERT BAUGHMAN (Name)

MGR ENV. CONTROL (Title) (212) 729-8040 (Phone)

5. Department of Environmental Conservation Interviewer BRUCE W. KNAPP

6. Standard Industrial Classification (SIC) Codes for Principal Products

Group Name	SIC Code (4 Digit)	Approximate % of [X] Production / / Value Added
a. REFINED COPPER	3331	100
b.		
c.		
d.		

7. Processes Used at Plant
a. ELECTROLYTIC REFINING
b.
c.
d.
e.

8. Products
a. REFINED COPPER
b.
c.
d.
e.

Company Code

Raw materials and other chemicals used in manufacturing processes.

a. CRUDE COPPER
b. SCRAP Cu
c.
d.
e.
f.
g.
h.
i.
j.

10. a. On Site Waste Water Treatment [X] Yes [ ] No

b. On Site Waste Water Treatment by July 1977 [ ] Yes [ ] No

c. On Site Waste Water Treatment by July 1983 [ ] Yes [ ] No

d. Industrial Sewer Discharge [X] Yes [ ] No Name of Sewage Treatment Plant NEWTOWN CREEK

e. SPDES No. _____ NPDES No. NY 00

11. a. Air Pollution Control Devices [X] Yes [ ] No Types BAGHOUSE

b. To Be Built [ ] Yes [X] No by / /

c. Air 100 Emission Point Registration Numbers (TOTAL) 411740 4202

12. a. Number of manufacturing employees 400 b. Manufacturing Floor Space 17 ACRES sq.ft.

13. Attach a plat or sketch of the facility showing the location of on-site process waste storage (if available).

14. Attach flow diagrams of chemical processes including waste flow outputs (if available).

15. In-house waste treatment capabilities: ACID NEUTRALIZATION WITH LIME - SETTLING TANK - FILTRATION

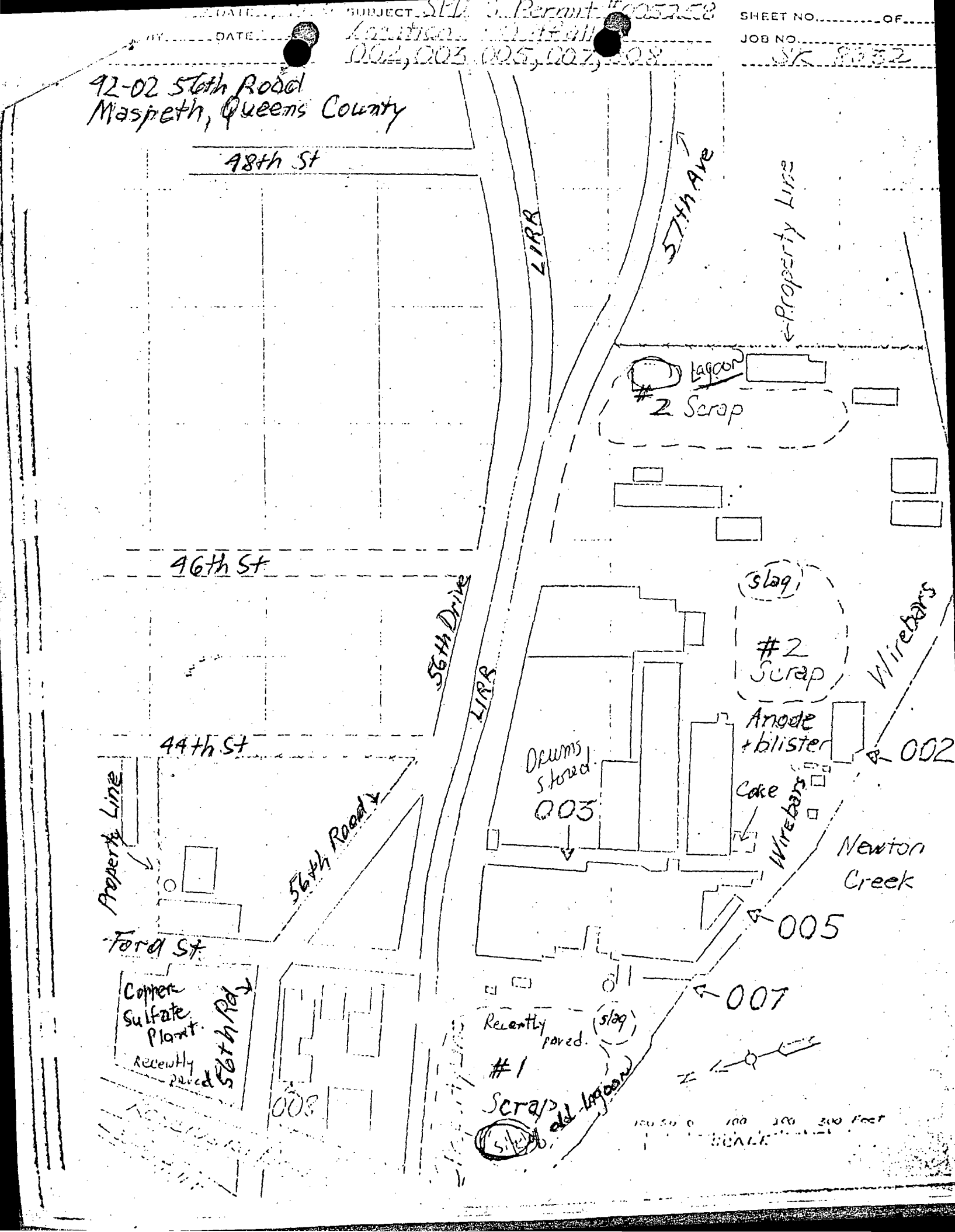
16. Is there a currently used or abandoned landfill, dump or lagoon on plant property? [ ] Yes [X] No

17. Industrial wastes produced or expected to be produced by plant.
1) HIDROXIDE SLUDGE CONTAINING TRACES OF COPPER & OTHER METALS
2)
3)
4)
5)
6)
7)
8)

18. Comments:

RECEIVED
JUN - 5 1973
SOLID WASTE

47-15-4(12/76)


DATE
BY
DATE
SUBJECT
SHEET NO. OF
JOB NO.
92-02 56th Road
Maspeth, Queens County
48th St
46th St
44th St
LIRR
57th Ave
Property Lines
Lagoon
#2 Scrap
slag
#2 Scrap
56th Drive
Wirebars
Anode + blister
002
Drums stored
003
Coke
Wirebars
Newton Creek
005
007
Property Line
56th Road
Ford St
Copper Sulfate Plant
Recently Paved
56th Rd
008
Recently paved
slag
#1 Scrap
old lagoon
slag
100 50 0 100 300 200 Feet
SCALE

Priority 3 Site Name Peters Lodge Elmhurst Co Region 2

County Queens

INITIAL EVALUATION OF INDUSTRIAL AND HAZARDOUS WASTE SITES

I. General Site Information

1. Site Location _____

2. Current owners ☐ or operators ☐ : _____

_____

Address _____

Contact _____ Phone _____

3. Time during which site was used: before 1900 to ?

4. Type of Site: Industrial Disposal ☐ Mixed Disposal Area ☐

Drum Storage ☐ Lagoon ☐ Other (specify) ☐ _____

5. Size of Site (approx.) _____ acres, and/or dimensions _____

6. Exposed waste: yes ☐ no ☐

II. Waste Characterization (See Section III for more details.)

1. Generator _____ Waste Types Ni [illegible] Cu Sn

Composition _____ Total Quantity _____ Bulk ☐ Drum ☐

2. Generator _____ Waste Types _____

Composition _____ Total Quantity _____ Bulk ☐ Drum ☐

3. Generator _____ Waste Types _____

Composition _____ Total Quantity _____ Bulk ☐ Drum ☐

4. Generator _____ Waste Types _____

Composition _____ Total Quantity _____ Bulk ☐ Drum ☐

Report prepared by: [illegible] Phone [illegible]

_____ Phone _____

→ See Attachment

FEB 13 1979

SOLID WASTE

HAZARDOUS WASTE DISPOSAL SITES REPORT
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Code: N

Site Code: 2-41-002

Name of Site: Phelps Dodge Refining Corp. Region: 2

County: Queens Town/City New York City

Street Address: 43-01 56th Road, Maspeth

Status of Site Narrative:

There are three processes done at this plant:
1. They produce tri-basic copper sulfate (pesticide)
2. Copper refinery
3. They produce copper sulfate pentahydrate.

They each have a NPDES permit to discharge into Newtown Creek.

Sludge from treatment plant is stored on the ground and then hauled from site.

Type of Site: Open Dump ☐ Treatment Pond(s) ☐ Number of Ponds ____
Landfill ☐ Lagoon(s) ☐ Number of Lagoons ____
Structure ☒

Estimated Size 17 Acres (plant size)

Hazardous Wastes Disposed? Confirmed ☐ Suspected ☒XX

*Type and Quantity of Hazardous Wastes:

TYPE	QUANTITY (Pounds, drums, tons, gallons)
metal hydroxide sludge composed of Fe, Cu, Ni	25,000 gals./yr.

*Use additional sheets if more space is needed.

Name of Current Owner of Site: Phelps-Dodge Corporation
Address of Current Owner of Site: _____

Time Period Site Was Used for Hazardous Waste Disposal:
1875 , 19 To Unknown , 19

Is site Active ☐ Inactive ☒
(Site is inactive if hazardous wastes were disposed of at this site and site was closed prior to August 25, 1979)

Types of Samples: Air ☒ Groundwater ☐ None ☐
Surface Water ☒ Soil ☐

Remedial Action: Proposed ☐ Under Design ☐
In Progress ☐ Completed ☐
Nature of Action:

Status of Legal Action: _____ State ☐ Federal ☐

Permits Issued: Federal ☐ Local Government ☐ SPDES ☐
* See below Solid Waste ☐ Mined Land ☐ Wetlands ☐ Other ☐

Assessment of Environmental Problems:

A preliminary investigation underway to gain information regarding this site.

Assessment of Health Problems:

none known.

Persons Completing this Form:

Anna Saracco — Ron Tramontano

G.D. Knowles

New York State Department of Environmental Conservation
Date 4/16/80

New York State Department of Health
Date

* NPDES No. NY0005258 - copper refinery facility
NY0022799 - copper sulfate facility
NY0034908 - basic copper sulfate facility

1/18/80
GDK:cl

Initial Mailing / /
Initial Contact / / by
Appointment Made 9/28/77 by BULK
Site or [Phone] Visit 9/28/77 by BULK
Follow-up / / by
Form Completed 9/28/77 by BULK
Comments:

S.F. compl.

Company Code 2 8 7 9 7 1 3

Company Name PHELPS DODGE REFINING CORP
Address 300 PARK AVE
N.Y., N.Y. 10022
County QUEENS Phone (212) PL1 - 3200
SIC Codes 1. (2879) 3.
2. 4.

New York State Hazardous Waste Survey
Department of Environmental Conservation
Division of Solid Waste Management
50 Wolf Road, Albany, N.Y. 12233 Telephone: (518) 457-6605

I. General Information

1. Company Name PHELPS DODGE REFINING - BASIC COPPER SULFATE PLANT

Mailing Address _____
Street City State Zip

Plant Location / / Same as above

42-02 56TH MASPETH N.Y 11378
Street City State Zip

2. If Subsidiary, Name of Parent Company PHELPS DODGE CORP

3. Individual Responsible for Plant Operations RAY SCHEURER
Name

P M (212) 729-8040
Title Phone

4. Individual Providing Information ROBERT BAUGHMAN
Name

MGR ENV. CONTROL
Title Phone

5. Department of Environmental Conservation Interviewer BULK

6. Standard Industrial Classification (SIC) Codes for Principal Products

Group Name	SIC Code (4 Digit)	Approximate % of /X/ Production / / Value Added
a. COPPER SULFATE	(2879)	100
b.		
c.		
d.		

7. Processes Used at Plant
a. CRYSTALLIZATION & EVAPORATION
b.
c.
d.
e.

8. Products
a. BASIC COPPER SULFATE
b.
c.
d.
e.

Company Code [| | | | | | | | | |]

Raw materials and other chemicals used in manufacturing processes.

a. COPPER SULFATE PENTAHYDRATE f. _____
b. _____ g. _____
c. _____ h. _____
d. _____ i. _____
e. _____ j. _____

10. a. On Site Waste Water Treatment [ ] Yes [X] No

b. On Site Waste Water Treatment by July 1977 [ ] Yes [X] No

c. On Site Waste Water Treatment by July 1983 [ ] Yes [X] No

d. Industrial Sewer Discharge [X] Yes [ ] No Name of Sewage Treatment Plant _____

e. SPDES No. _____ NPDES No. N.Y. 0034908

11. a. Air Pollution Control Devices [ ] Yes [ ] No Types _____

b. To Be Built [ ] Yes [ ] No by [/ /]

c. Air 100 Emission Point Registration Numbers 411740 4202

12. a. Number of manufacturing employees 400 (TOT.) b. Manufacturing Floor Space 17 ACRES sq.ft.

13. Attach a plat or sketch of the facility showing the location of on-site process waste storage (if available).

14. Attach flow diagrams of chemical processes including waste flow outputs (if available).

15. In-house waste treatment capabilities: _____

16. Is there a currently used or abandoned landfill, dump or lagoon on plant property? [ ] Yes [ ] No

17. Industrial wastes produced or expected to be produced by plant.

1) (N/A)
2)
3)
4)
5)
6)
7)
8)

18. Comments: _____

ED
...11 2
1978
...ID WASTE

17-15-1(12/76)

Initial Mailing / / by
Initial Contact / / by
Appointment Made 9/28/72 by BWK
Site or (Phone) Visit 9/28/72 by BWK
Follow-up / / by
Form Completed 9/28/72 by BWK
Comments:

S.F. compl.

Company Code 2 8 1 9 7 3 0 7 8

Company Name PHELPS DODGE REFINING CORP
Address 300 PARK AVE
N.Y., N.Y. 10022
County QUEENS Phone (212) PLI-3200
SIC Codes 1. 2819 3.
2. 4.
Industrial inorganic chemicals, Not elsewhere classified

New York State Hazardous Waste Survey
Department of Environmental Conservation
Division of Solid Waste Management
50 Wolf Road, Albany, N.Y. 12233 Telephone: (518) 457-6605

I. General Information

1. Company Name PHELPS DODGE REFINING - COPPER SULFATE PLANT

Mailing Address 300 PARK AVE (Street) N.Y. (City) N.Y. (State) (Zip)

Plant Location / / Same as above

92-02 56TH RD (Street) MASPETH (City) N.Y. (State) 11378 (Zip)

2. If Subsidiary, Name of Parent Company PHELPS DODGE

3. Individual Responsible for Plant Operations RAY SCHEURER (Name)

PLANT MGR. (Title) (212) 729-8040 (Phone)

4. Individual Providing Information ROBERT BAUGHMAN (Name)

MGR ENV. CONTROL (Title) (212) 729-8040 (Phone)

5. Department of Environmental Conservation Interviewer B.W.K

6. Standard Industrial Classification (SIC) Codes for Principal Products

	Group Name	SIC Code (4 Digit)	Approximate % of /X/ Production / / Value Added
a.	Copper Sulfate Pentahydrate	2819	100
b.			
c.			
d.			

7. Processes Used at Plant
a. CRYSTALLIZATION / EVAPORATION
b.
c.
d.
e.

8. Products
a. COPPER SULFATE PENTAHYDRATE
b.
c.
d.
e.

Company Code [ ]

materials and other chemicals used in manufacturing processes.

a. H_2SO_4 f. ____
b. GLUE g. ____
c. SURFACE ACTIVE AGENTS h. ____
d. SODA ASH i. ____
e. ____ j. ____

0. a. On Site Waste Water Treatment [X] Yes [ ] No

b. On Site Waste Water Treatment by July 1977 [X] Yes [ ] No

c. On Site Waste Water Treatment by July 1983 [X] Yes [ ] No

d. Industrial Sewer Discharge [X] Yes [ ] No Name of Sewage Treatment Plant N.Y.C - NEWTOWN CREEK

e. SPDES No. ____ NPDES No. N.Y. CO 022799

1. a. Air Pollution Control Devices [X] Yes [ ] No Types ____

b. To Be Built [ ] Yes [ ] No by / /

c. Air 100 Emission Point Registration Numbers ____

2. a. Number of manufacturing employees for 400 b. Manufacturing Floor Space (11 ACRES) sq.ft.

3. Attach a plat or sketch of the facility showing the location of on-site process waste storage (if available).

4. Attach flow diagrams of chemical processes including waste flow outputs (if available).

5. In-house waste treatment capabilities: ____

6. Is there a currently used or abandoned landfill, dump or lagoon on plant property? [ ] Yes [X] No

7. Industrial wastes produced or expected to be produced by plant.
1) SLUDGE FROM WATER TREATMENT
2) ____
3) ____
4) ____
5) ____
6) ____
7) ____
8) ____

8. Comments: ____

47-15-4(12/76)

Company Code [ ][ ][ ][ ][ ][ ][ ][ ][ ]

Waste Characterization and Management Practic
(Use separate form for each waste stream)

1. Waste Stream No. 1 (from Form I, Number 17)

2. Description of process producing waste WASTEWATER TREATMENT

3. Brief characterization of waste METAL HYDROXIDE SLUDGE

4. Time period for which data are representative CURRENT to _____

5. a. Annual waste production 25,000 / / tons/yr. [X] gal./yr.

   b. Daily waste production _____ / / tons/day / / gal./day

   c. Frequency of waste production: / / seasonal / / occasional [X] continual

   / / other (specify) _____

6. Waste Composition

   a. Average percent solids 15 % b. pH range 7 to 10

   c. Physical state: / / liquid, / / slurry, [X] sludge, [X] solid,

   / / other (specify) _____

d. Component	Average Concentration	[X] wet weight / [X] dry weight	
1. FE	10-50	[X] wt.%	/ / ppm
2. Cu	1-20	[X] wt.%	/ / ppm
3. Ni	0-5	[X] wt.%	/ / ppm
4.		/ / wt.%	/ / ppm
5.		/ / wt.%	/ / ppm
6.		/ / wt.%	/ / ppm
7.		/ / wt.%	/ / ppm
8.		/ / wt.%	/ / ppm
9.		/ / wt.%	/ / ppm
10.		/ / wt.%	/ / ppm

Company Code

e. Analysis of composition is / /theoretical /X/laboratory /X/estimate
(attach copy of laboratory analysis if available)

f. Projected / /increase, / /decrease in volume from base year: 0 % by July 1977;

0 % by July 1983. ?

g. Hazardous properties of waste: / /flammable / /toxic / /reactive / /explosive

/ /corrosive / /other (specify) _____ ?

7. On Site Storage

a. Method: / /drum, / /roll-off container, / /tank, / /lagoon, /X/other (specify) On Ground ?

b. Typical length of time waste stored _____ / /days, / /weeks, /X/months

c. Typical volume of waste stored _____ / /tons, /X/gallons

d. Is storage site diked? /X/Yes / /No

e. Surface drainage collection / /Yes /X/No

8. Transportation

a. Waste hauled off site by / /you /X/others LAST HAULER

b. Name of waste hauler (formerly) VILLAGE CESSPOOL

Address _____
Street City

( )
State Zip Code Phone

9. Treatment and Disposal

a. Treatment or disposal: / /on site /X/off site

b. Waste is / /reclaimed / /treated /X/land disposed / /incinerated

/ /other (specify) UNKNOWN AT MOMENT

c. Off site facility receiving waste

Name of Facility _____

Facility Operator _____

Facility Location _____
Street City

( )
State Zip Code Phone